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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/641,208	08/18/2000	Loc X. Phan	AT00085	7275

20350 7590 05/07/2003

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EXAMINER
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LUCCHESI, NICHOLAS D

ART UNIT	PAPER NUMBER
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3764

DATE MAILED: 05/07/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/641,208

Applicant(s)  
Phan

Examiner  
Nick Lucchesi

Art Unit  
3764



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Feb 19, 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 19-56 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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## **DETAILED ACTION**

### ***Withdrawal Of Indication Of Allowability***

1. The previous indication of allowability of claims 19-38 has been withdrawn, in view of further consideration of the art of record. A new rejection follows.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 19-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chishti et al in view of Morrow et al.

Chishti et al disclose first, intermediate and final tooth positioning appliances 100 similar to that as claimed by applicant in these claims, as well as a method of repositioning teeth from an initial arrangement, to a final arrangement. Note that the appliances are polymeric shells, essentially the same as that claimed by applicant. Note also that Chishti et al disclose forming the appliances via the same method as that claimed by applicant, namely, providing a digital data set representing a modified tooth arrangement, controlling a fabrication machine based on the digital data set to produce a positive model of the modified tooth arrangement, and producing the dental appliance as a negative of the positive model. See col. 6 and col. 7.

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Chishti et al do not disclose coating the appliances with a lubricious composition.

Morrow et al disclose coating a polymeric mouthpiece with a lubricious composition, to increase the comfort to the wearer.

It would have been obvious to one skilled in the art to coat the appliances of Chishti et al with a lubricious composition, as taught by Morrow et al, in view of the Morrow et al teaching that such a composition applied to a mouthpiece allows for greater comfort to the wearer.

With regard to claims 25-30, note that Morrow et al discloses substances which are considered to be functional equivalents of the coatings recited in these claims, and thus their use thereof with the Morrow appliance is considered to be an obvious matter of choice to one skilled in the art.

With regard to claims 32-37, note that Morrow et al contemplate spraying, dipping and pouring. The use of other methods such as electro-static discharge, baking and precoating, are considered to be obvious choices to one skilled in the art, desiring a particular characteristic of the appliance.

#### ***Response to Arguments***

4. Applicant's arguments filed 9/16/2002 have been fully considered but they are not persuasive.

Applicant bases arguments upon the assertion that it would not have been obvious to coat the mouthpieces of Chishti et al with a lubricious composition, because the mouthpieces of Chishti et al are used for moving teeth and thus would not work effectively.

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It is the examiner's position that the teaching of Morrow et al is to increase the comfort of the wearer of such a mouthpiece, by applying such a lubricious composition. Thus, one skilled in the art would recognize that such a composition could be applied to the exterior or the interior of the Chishti et al mouthpieces, if one wished to increase comfort while wearing them. The mouthpieces of Chishti et al would still be capable of moving teeth, as they fit rather snugly.

Applicant further argues that the proposed combination of Morrow et al and Chishti et al would not be obvious because Chishti et al requires the appliances to apply forces to the teeth, and thus the application of a lubricious composition would hinder these forces.

However, it is the examiner's opinion that the application of such a lubricious composition would be obvious because such application would overcome the problems described by Morrow et al, such as "dry mouth", which occurs from wearing the appliance over time, or from activity performed while wearing the appliance. It is the examiner's opinion that such a lubricant as disclosed by Morrow et al would do nothing to prevent the appliance from remaining on the teeth, but would rather serve to increase comfort within the oral cavity in general. Such a composition would prevent the appliance from sticking to the oral tissues, a problem solved by Morrow et al.

Furthermore, the applicant has requested the examiner point to suitable motivation in the prior art to suggest the desirability of combining Morrow et al and Chishti et al. The examiner submits that the motivation clearly lies within Morrow et al itself, where it is repeatedly disclosed that such a coating *increases comfort to the wearer*. Thus, the motivation was not gleaned from hindsight, but rather from Morrow et al itself. There is no teaching in Morrow et al that such a

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coating is only applicable to athletic mouthpieces, and it is submitted by the examiner that one skilled in the art of mouthpieces would recognize that the coating of Morrow et al could be used with any mouthpiece, including those disclosed by Chishti et al.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Lucchesi whose telephone number is (703) 308-2698.

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Nick Lucchesi

May 5, 2003



**NICHOLAS D. LUCCHESI  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700**